

Purchase Order Receipt Listing

Tuesday, March 28, 2017 1:48:54 PM

All amounts are calculated in domestic currency.

All Vendors PO ID PO35685 Receipt Dates from 3/28/2017 to 3/28/2017 All Line Item Types
All Item ID/GL/WOs All Rec. Employees All Currencies
Grouped by Vendor ID

Purchase Order ID/ Curr Type	Line Nbr/ Insp	Project ID	Reference/ Description/ Cert Std	PO U/M/ Stock U/M	Required Date Required Qty	Recv Date/ Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
Vendor ID \ Vendor Name VU-TW/M001 TW Metals											
PO35685 USD	2 No		M304TR0.500W.049 f 304 RD Tube .500 x .049W m137169	- 500 X .049	3/31/2017 60.0000	3/28/2017 PLOU01	60.0000 ✓		0.0000 0.0000	0 0	\$0.00
	3 No		M316TR1.00W.120 f 316 RD tubing 1.00 x f .120w m137169	- 997 X .120	3/31/2017 12.0000	3/28/2017 PLOU01	20.0000		0.0000 0.0000	0 0	\$0.00
	4 No		M6061T6T0.375W.05 f 8 6061-T6 RD Tube .375 x.058W m137169	- 374 X 60	3/31/2017 80.0000	3/28/2017 PLOU01	84.0000		0.0000 0.0000	0 0	\$0.00
	5 No		M6061T6T0.625W.12 f 5 6061-T6 RD Tube 0.625 X.125W m137169	- 626 X 126	3/31/2017 20.0000	3/28/2017 PLOU01	24.0000		0.0000 0.0000	0 0	\$0.00
	6 No		M6061T6T1.000W06 f 5 6061T6 RD TUBE 1.00 x .065w m137169	- 549 X 0.675	3/31/2017 20.0000	3/28/2017 PLOU01	24.0000		0.0000 0.0000	0 0	\$0.00
	7 No		71401-45 PROCUREMENT QUALITY CLAUSES m137169		3/31/2017 1.0000	3/28/2017 PLOU01	1.0000		0.0000 0.0000	0 0	\$0.00

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
Total Received Quantity:											213.0000
Total Qty to Inspect (PO U/M):											0.0000
Total Reject Quantity:											0.0000
Total Receipt Value:											\$0.00
Total Balance Due Quantity:											0.0000



Packing Slip

ORDER NO.: 60628203 FROM: CRAN PAGE 1

53.351 REQ. DATE: 03/31/17 CONFIRMED

SHIP TO:
DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY ON
ONTARIO CANADA
CN K6A 1K7

SHIP BY: 03/24/17
VIA: COMMON CARRIER
FREIGHT: PREPAID
RELEASE NO.:
RECEIVING PHONE:

SALESPERSON: DONNA SMALLEY
NET 30 DAYS
F.O.B.: SHIPPING POINT
CUST ORD NO.: PO35685

LINE ITEM DESCRIPTION

0001 36506 SMLS CD 304/L A269 1/2 OD X .049 WA
INVOICE QTY 60.000 FT
SHIPPED QTY 60.000 FT
WT 14.155
PCS 3

** 1 TEST REPORTS REQUIRED **

ECN: 2B999.9 HT: YX1506712
PO: 49336439
MLT: CHINA
MFG: CHINA
SLB/CL: 12-19
CUSTOMER QTY: 60.000
Expiration Date: 0/00/00
UOM FT

0002 37123 SMLS CD 316/L A269 1 OD X .120 WA

INVOICE QTY 20.000 FT
SHIPPED QTY 20.000 FT
WT 22.560
PCS 1

** 1 TEST REPORTS REQUIRED **

ECN: 2B999.9 HT: YX1605603
PO: 49362755
MLT: CHINA
MFG: CHINA
SLB/CL: 12-24
CUSTOMER QTY: 20.000
Expiration Date: 0/00/00
UOM FT

0003 41952 D6061-T6 3/8 OD X .058 WA

INVOICE QTY 84.000 FT
SHIPPED QTY 84.000 FT
WT 5.695
PCS 7

** 1 TEST REPORTS REQUIRED **

ECN: FAR99
PO: 49361230 HT: 1180968
MLT: UNITED STATES
MFG: UNITED STATES
SLB/CL: 438268
CUSTOMER QTY: 84.000
Expiration Date: 0/00/00
UOM FT

8/14/03

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE
PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL
REVIEW.
http://www.tmmetals.com/invoice-terms.htm



World High-Performance Metals Group



Packing Slip

ORDER NO.: 60628203 FROM: CRAN PAGE 2

CUST NUMBER: 1203820 NET WGT: 53.351 REQ. DATE: 03/31/17 CONFIRMED

SHIP TO: DART AEROSPACE LTD 1270 ABERDEEN ST HAWKESBURY ON CANADA

SHIP BY: 03/24/17 COMMON CARRIER PREPAID VIA: FREIGHT RELEASE NO.: RECEIVING PHONE: WIDTH LENGTH 12 FT ML

LINE ITEM DESCRIPTION 0004 42588 D6061-T6 5/8 OD X .125 WA INVOICE QTY 24.000 FT SHIPPED QTY 24.000 FT WT 5.541

CLN# ORD QTY 24.000 FT INVOICE QTY 24.000 FT SHIPPED QTY 24.000 FT WT 5.400

0005 43284 D6061-T6 1 OD X .065 WA INVOICE QTY 24.000 FT SHIPPED QTY 24.000 FT WT 5.400

CLN# ORD QTY 24.000 FT INVOICE QTY 24.000 FT SHIPPED QTY 24.000 FT WT 5.400

0005 43284 D6061-T6 1 OD X .065 WA INVOICE QTY 24.000 FT SHIPPED QTY 24.000 FT WT 5.400

CLN# ORD QTY 24.000 FT INVOICE QTY 24.000 FT SHIPPED QTY 24.000 FT WT 5.400

0005 43284 D6061-T6 1 OD X .065 WA INVOICE QTY 24.000 FT SHIPPED QTY 24.000 FT WT 5.400

THANK YOU FOR THIS ORDER



O'Neal High-Performance Metals Group

Packing Slip



ORDER NO.: 60628203 FROM: CRAN PAGE 3

CUST NUMBER: 1203820 NET WGT: 53.351 REQ. DATE: 03/31/17 CONFIRMED
SOLD TO: DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY ON
CANADA
SALESPERSON: DONNA SMALLEY
NET 30 DAYS
SHIPPING POINT
F.O.B.: P035685
CUST ORD NO.:
LINE ITEM DESCRIPTION RT 000-
SHIP BY: 03/24/17
COMMON CARRIER
PREPAID
VIA: FREIGHT: RELEASE NO.:
RECEIVING PHONE: WIDTH LENGTH
UNLOAD TYPE: NONE SPECIFIED

SHIP TO: DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY ON
ONTARIO CANADA
CN K6A 1K7

DATE SHIPPED

DATE FILLED

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE
PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL
REVIEW.
<http://www.twmetals.com/invoice-terms.html>



O'Neal High-Performance Metals Group

Packing Slip



ORDER NO.: 60628203 FROM: CRAN PAGE 4

53.351 REQ. DATE: 03/31/17 CONFIRMED

SHIP TO:
DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY ON
ONTARIO CANADA
CN K6A 1K7

SHIP BY:
27 ENGLEHARD DRIVE
MONROE TWP
NJ 08831

CUST NUMBER: 1203820 NET WGT:
SOLD TO:
DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY ON
CANADA
SALESPERSON: DONNA SMALLEY
TERMS: NET 30 DAYS
F.O.B.: SHIPPING POINT
CUST ORD NO.: PO35685
COMMON CARRIER
FREIGHT: PREPAID
RELEASE NO.:
RECEIVING PHONE:

"TW Metals MSDS data is available on our web site at www.twmetals.com. MSDS data can be found under the Technical Resources Tab, Product Statistics & Data and the TW Metals MSDS's heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location."

"CERTIFICATE OF CONFORMANCE"

"TW Metals certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipments to Europe and China consists of manufactured wood products and complies with the European emergency measures for confiterous non-manufactured wood packing material"

Authorized Test Report Clerk Cm Henry Date: 3/24/17

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL REVIEW.
<http://www.twmetals.com/invoice-terms.html>

PUFATM

MILL TEST REPORT

Producer of Premium Stainless Steel Seamless Tubes

Purchaser: TW METALS-Carol Stream	Certificate No.: 16-1-92	Date of Issue: 2016.1.5	Contract No.: TWM P.O.No.: M49336439	Commodity: Stainless Steel Seamless Tubes	Specifications: ASTM A213-15c/ASME SA213-15/ASTM A269-15a EAW	Delivery Condition: OD Polished to 240 Grit	Process: Cold Drawn
Steel Grade	Heat Number	Lot Number	Dimensions	Quantity	Pieces	Feet	
TP304/TP304L	YX1506-712	12-19	1/2" x 0.049" x 20'	2300	46,000		

Chemical Composition by Weight (%)							
Element	C	Mn	P	S	Si	Cr	Ni
Requirements	≤0.035	≤2.00	≤0.045	≤0.030	≤1.00	18.00-20.00	8.00-12.00
Ladle Analysis	0.013	0.65	0.032	0.002	0.32	18.28	8.05
Product Analysis	0.017	0.61	0.033	0.002	0.28	18.31	8.55

Mechanical Properties									
Test Item	Elongation (% in 2")		Tensile Strength (PSI)		Yield Strength (PSI)				
	≥35		≥75,000		≥30,000				
Requirements	63/64		97,000/98,000		43,000/44,000				
Test Results									
Test Item	Reduction of Area	Hardness	Cold Bend	Flaring	Flattening	Flange	P.M.T. Test	Z (%)	
								HRB≤80	
Requirements	-		-		22%		e=0.09		
Test Results	-		-		Passed		Passed		
Test Item	Eddy Current Test	Air Underwater Pressure Test	Ultrasonic Test	Intergranular Corrosion Test	Macroscopic Inspection	Appearance	ASTM A262 E		
							End Cut		
Requirements	ASTM E 426		-		OK		OK		
Test Results	Passed		-		OK		OK		

PED Certified by SZUTEST 2195-PED-1526002

ISO 9001:2008 Certified by Intertek 110703068

ISO 9001:2008 Certified by Intertek 110703068
 PED Certified by SZUTEST 2195-PED-1526002

Additional Remarks:

(1) All tubes annealed to above 1900 Deg F and water quenched below 800 Deg F in 3 minutes

CANNOT CERTIFY COMPLIANCE
 FAR BAA / DFARS BAA / FAR TAA

(2) All tubes tested per ASTM A1016-14
 (3) Materials is NACE MR0103-2007 compliant (per Section 2.5)
 (4) Materials is NACE MR0175/ISO 15156-2003 compliant (per Section 4.2.1)

(5) In Compliance with EN 10204-3.1
 (6) In Compliance with RoHS Stipulation
 (7) No weld repair performed
 (8) Free from mercury contamination
 (9) Free from radioactive contamination
 (10) Billets melt and pipes/tubes manufactured in China
 (11) All tubes 100% PMI tested
 (12) All tubes 100% Eddy Current tested

By:



James Shi / Manager

Quality Control Department

Shanghai Pufa Stainless Steel Pipe Factory

No. 59, Shuangye Road, Wanggang, New Pudong District, Shanghai, China

We hereby certify that this report is true and correct.



MILL TEST REPORT

Producer of Premium Stainless Steel Seamless Tubes

Purchaser: TW METALS-Cranbury	Certificate No.: 2017-1-87
Contract No.: TWM P.O.No.: M49362755	Date of Issue: 2017.1.11
Commodity: Stainless Steel Seamless Tubes	Specifications: ASTM A213-15c/ASME SA213-15/ASTM A269-15a EAW
Process: Cold Drawn	Delivery Condition: OD Polished to 240 Grit

Steel Grade	Heat Number	Lot Number	Dimensions	Quantity
TP316/TP316L	YX1605-603	12-24	1"x0.120"x20'	75 Pieces
				1,500 Feet

Chemical Composition by Weight (%)									
Element	C	Mn	P	S	Si	Cr	Ni	Mo	Co
Requirements	≤0.035	≤2.00	≤0.045	≤0.030	≤1.00	16.00-18.00	10.00-14.00	2.0-3.0	-
Ladle Analysis	0.020	0.66	0.032	0.001	0.40	16.69	10.05	2.03	-
Product Analysis	0.015	0.60	0.035	0.003	0.34	17.02	10.12	2.02	-

Mechanical Properties									
Test Item	Elongation (% in 2")	Tensile Strength (PSI)	Yield Strength (PSI)	Rp / 0.2%	Reduction of Area Z (%)	Hardness	Cold Bend	Flaring	Flattening
Requirements	≥35	≥75,000	≥30,000	≥30,000	65/66	HRB≤80	73/75	25%	e=0.09
Test Results	65/66	78,000/79,000	36,000/37,000	36,000/37,000	65/66	HRB≤80	73/75	25%	e=0.09
Test Item	Test Results	Test Results	Test Results	Test Results	Test Results	Test Results	Test Results	Test Results	Test Results
Requirements	-	-	-	-	-	-	-	-	-
Test Results	-	-	-	-	-	-	-	-	-
Test Item	Eddy Current Test	Air Underwater Pressure Test	Ultrasonic Test	Intergranular Corrosion Test	Macroscopic Inspection	Appearance	End Cut	OK	OK
Requirements	ASTM E 426	-	-	ASTM A262 E	-	-	-	-	-
Test Results	Passed	-	-	OK	OK	OK	OK	OK	OK

ISO 9001:2008 Certified by CAS I17 16 QU 0053-06 ROS
PED Certified by SZUTEST 2195-PED-1526002

Additional Remarks:

(1) All tubes annealed to above 1900 Deg F and water quenched below 800 Deg F in 3 minutes

- (2) All tubes tested per ASTM A1016-14
 (3) Materials is NACE MR0103-2007 compliant (per Section 2.5)
 (4) Materials is NACE MR0175/ISO 15156-2003 compliant (per Section 4.2.1)

CANNOT CERTIFY COMPLIANCE
FAR BAA / DFARS BAA / FAR TAA

By:

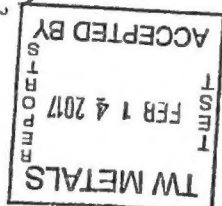
James Shi / Manager

Quality Control Department

Jiangsu Pufa Stainless Steel Tube Co., Ltd.

No. 99, Xuean Middle Road, Dongchen Town, Rugao City, Jiangsu Province, P.R.China

We hereby certify that this report is true and correct.



Control No.: 2839

PRECISION TUBE CO.
287 WISSAHICKON AVE.
NORTH WALES PA 19454

CERTIFIED TEST REPORT

CUSTOMER PURCHASE ORDER NO.		CUST. ORD. NO.		PRECISION TUBE P/N	
M 49361230 LINE 001		438268		24A037500580006	
SOLD TO: TW METALS 235 TUBEWAY CAROL STREAM, IL 60188 UNITED STATES		SHIP TO: TW METALS 235 TUBEWAY CAROL STREAM, IL 60188 UNITED STATES			
QUANTITY ORD.		DESCRIPTION			

4008 FT	METAL - 6061 ALUM	TEMPER - T6	SPEC - AMS 4082B	ASTM-B-210-12	LENGTH - 12 FT	LGTH TOL. +.1250 IN -.0000 IN	SHAPE - ROUND	FINISH - STRAIGHT EXACT LENGTHS	ID .3750 +.0030 -.0030	WALL .0580 +.0040 -.0040
MECHANICAL PROPERTIES										
SAMPLE #	TENSILE STRENGTH (P.S.I.)	YIELD STRENGTH (P.S.I.)	ELONGATION IN 2 INCHES (%)	ROCKWELL HARDNESS	AVERAGE GRAIN SIZE (MM.)					
1	44,103	37,550	20							
DESTRUCTIVE TESTS										
Comments: FAR BAA COMPLIES, DPARS BAA COMPLIES, FAR TAA COMPLIES										
EDDY CURRENT: PASS										
CHEMICAL COMPOSITION										

SAMPLE #		1
TENSILE STRENGTH (P.S.I.)	44,103	
YIELD STRENGTH (P.S.I.)	37,550	
ELONGATION IN 2 INCHES (%)	20	
ROCKWELL HARDNESS		
HARDNESS GRAIN SIZE (MM.)		

DESTRUCTIVE TESTS	
Comments: FAR BAA COMPLIES, DFARS BAA COMPLIES, FAR TAA COMPLIES	
NON-DESTRUCTIVE TESTS	
EDDY CURRENT: PASS	
CHEMICAL COMPOSITION	
ALLOY: 6061 HEAT: TRACABILITY #: 1180968	
RAW MATL VENDOR: PG7874 - Kaiser Aluminum	
Min	Max
0.40	0.80
0.70	0.40
0.15	0.15
0.80	1.20
0.04	0.35
0.25	0.15
Rem.	
Si	Fe
Cu	Mn
Mg	Cr
Zn	Al
Ti	

9-89

ACCEPTED BY
DEC-28-18
TWO METALS

We hereby certify that the material has been manufactured and tested in accordance with the requirements of the applicable specifications and descriptions set forth on Precision Tube's sales acknowledgment. During the manufacturing, testing and inspection, the product did not come into direct contact with mercury or any of its compounds, nor with any mercury containing device employing a single boundary containment. Test results indicate that the material is compliant with the current revision of the RoHS Directive (2011/65/EU).

Melted and Manufactured in USA
QMS Registered to ISO 9001: 2008Art Onalilis
QA Manager12/21/16
Page: 1 of 1

KAISER ALUMINUM FABRICATED PRODUCTS

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
2425 STEVENS DRIVE
RICHLAND, WA 99352

CERTIFIED TEST REPORT
http://www.kaiser-aluminum.com



CUSTOMER PO NUMBER: PT07874		SHIP TO: PRECISION TUBE CO 287 WISSAHICKON AVENUE N. WALES, PA 19454 USA	
KAISER ORDER NUMBER: 320897	LINE ITEM: 001	SHIP DATE: 10/28/2016	KAISER LOT NUMBER: 50751-347
QUANTITY: 1950,000 PCS	B/L NUMBER: 006171	SOLD TO: MUELLER INDUSTRIES, INC PRECISION TUBE 8285 TOURNAMENT DRIVE STE. 150 MEMPHIS, TN 38125 USA	
WEIGHT SHIPPED: 10769,000 LB			
PRODUCT DESCRIPTION: 5.400 LB/PC .500 LB/-0 LB 1.312 OD X .085 WALL ESRT			
TEMPER: O	ALLOY: 6061	WIDTH: 13.984 FT	LENGTH: 13.984 FT

Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	%ELONG IN 2	HARDNESS	CONDUCT.	BEND
50751-347	0001	0001	18.7	5.9	27.2	NA	NA	NA
50751-347	0001	0002	18.4	5.5	27.8	NA	NA	NA
50751-347	0001	0003	18.3	5.6	27.1	NA	NA	NA
50751-347	0001	0004	18.0	5.5	26.7	NA	NA	NA
50751-347	0001	0005	18.3	5.9	27.2	NA	NA	NA
50751-347	0001	0006	17.7	5.6	27.6	NA	NA	NA
50751-347	0001	0007	18.3	5.9	26.8	NA	NA	NA
50751-347	0001	0008	18.6	5.7	25.7	NA	NA	NA
50751-347	0001	0009	18.2	5.5	26.5	NA	NA	NA
50751-347	0001	0010	18.6	5.8	26.0	NA	NA	NA
50751-347	0001	0011	18.5	5.7	28.6	NA	NA	NA

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Tl	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	.02
Typical	.58	.30	.22	.06	1.03	.09	.08	.03	.00	.00	.00	.01	.02

Applicable Requirements:

ASTM-B241-16 NON-STENCILED ASTM-B221-14 ASTM-B345-11 AMS-QQ-A-200/3A TYPE I
UNS#A96061 Also conforms to EN 10204 3.1

Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA
MERCURY IS NOT A NORMAL BACKGROUND ELEMENT IN ALUMINUM ALLOYS. NEITHER MERCURY NOR ANY OF ITS COMPOUNDS ARE UTILIZED BY KAISER ALUMINUM IN THE MANUFACTURE OF THIS MATERIAL.



Plant Serial: 00013006
Kaiser Order Number: 320897
Line Item: 001

KAISER ALUMINUM FABRICATED PRODUCTS

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
2425 STEVENS DRIVE
RICHLAND, WA 99352

CERTIFIED TEST REPORT
<http://Online.KaiserAluminum.com>

CERTIFICATION
Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.
JOSEPH AMES, QUALITY MANAGER




Plant Serial: 00015006
Kaiser Order Number: 320897
Line Item: 001



Best in Class

CERTIFIED TEST REPORT
<http://Online.KaiserAluminum.com>

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
6573 W. WILLIS ROAD
CHANDLER, AZ 85226

CUSTOMER PO NUMBER: M49360917-1		CUSTOMER PART NUMBER: 42588		PRODUCT DESCRIPTION: Drawn Seamless Tube/Pipe	
KAISER ORDER NUMBER: LINE ITEM: 001		SHIP DATE: 12/05/2016		KAISER LOT NUMBER: F00229976	
WEIGHT SHIPPED: 239,000 LB		QUANTITY: 86,000 PCS		B/L NUMBER: 223667	
SHIP TO: TW METALS INC 27 ENGLEHARD DRIVE EXIT 8A OFF NJ TPK MONROE TWP, NJ 08831 USA		SOLD TO: TW METALS INC 760 CONSTITUTION DRIVE SUITE 204 EXTON, PA 19341 USA			

Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CON%IACS	BEND
F00229976	0001	1	46.9	40.5	17.5	N/A	N/A	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Al	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
D76008	.59	.26	.22	.04	1.00	.10	.05	.02	.00	.00	.00	.01	.02

Applicable Requirements:

Description: OD: 0.6250", Wall: 0.1250", Round @
AMS4082P AMS-WW-T-700/6C ASTM B210-12 WW-T-700/6F
WE TAKE EXCEPTION TO PARA. 5.2.1., Per AMS-4082P, WAS NOT OILED.
This Product Complies to FAR BAA, DEARS BAA, FAR TAA
COMPLIES TO DIN EN 10204 JAN 2005
No Weld Repair. Mercury Free.

Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA
MATERIAL COMPLIES WITH FAR BAA (FAR 52.225-1, BUY AMERICAN ACT-SUPPLIES), DEARS BAA (DEARS 252.225-7001 BUY AMERICAN ACT & BAL OF PAYMENTS PROG), AND FAR TAA (FAR 52.225-5 TRADE AGREEMENTS).





Best in Class

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
6573 W. WILLIS ROAD
CHANDLER, AZ 85226

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms & conditions of sale. Test reports are on file subject to examination.

Hans Kattenidt, Quality Manager

CERTIFIED TEST REPORT
<http://Online.KaiserAluminum.com>

Plant Serial: 00023570
Kaiser Order Number: 221973
Line Item: 001

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
6573 W. WILLIS ROAD
CHANDLER, AZ 85226

CERTIFIED TEST REPORT
<http://Online.KaiserAluminum.com>

Best in Class

CUSTOMER PO NUMBER: M49353002-1		CUSTOMER PART NUMBER: 43284		PRODUCT DESCRIPTION: Drawn Seamless Tube/Pipe	
KAISER ORDER NUMBER: 220852		SHIP DATE: 07/16/2016		KAISER LOT NUMBER: F00218927	
WEIGHT SHIPPED: 739.000 LB		B/L NUMBER: 222328		DIAW/DAF/THKNS: 12.000 FT	
SHIP TO: TW METALS INC 27 ENGLEHARD DRIVE EXIT 8A OFF NJ TPK MONROE TWP, NJ 08831 USA		SOLD TO: TW METALS INC 760 CONSTITUTION DRIVE SUITE 204 EXTON, PA 19341 USA			

Actual Physical Properties

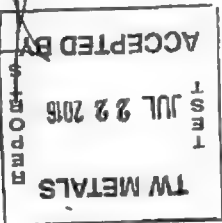
REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CONFIACS	BEND
F00218927	0001	1	47.7	39.9	20.5	N/A	N/A	N/A
F00218927	0002	1	47.7	40.9	18.0	N/A	N/A	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
D75918	.58	.31	.22	.06	.99	.10	.06	.03	.00	.00	.00	.01	.02

Applicable Requirements:

Description: OD: 1.0000", Wall: 0.0650", Round @
AMS-WW-T-700/6C
ASTM B210-12
AMS 4082P
WE TAKE EXCEPTION TO PARA. 5.2.1., Per AMS-4082P, WAS NOT OILED.
This Product Complies to FAR BAA, DEARS BAA, FAR TAA
COMPLIES TO DIN EN 10204 JAN 2005
No Weld Repair. Mercury Free.



Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA
MATERIAL COMPLIES WITH FAR BAA (FAR 52.225-1, BUY AMERICAN ACT-SUPPLIES), DEARS BAA (DEARS 252.225-7001 BUY AMERICAN ACT & BAL. OF PAYMENTS PROG), AND FAR TAA (FAR 52.225-5 TRADE AGREEMENTS).




Hans Kattentidt, Quality Manager

Kaiser Aluminum Fabricated Products, LLC ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms conditions of sale. Test reports are on file subject to examination.

CERTIFICATION

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
6573 W. WILLIS ROAD
CHANDLER, AZ 85226

KAISER
ALUMINUM
FABRICATED PRODUCTS



CERTIFIED TEST REPORT
<http://Online.KaiserAluminum.com>

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M316T8100W.100 DATE: 17-04-03

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 20'
 QUANTITY INSPECTED: 20'
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .120"
 THICKNESS RECEIVED: .120"
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

PO / BATCH NO.: PO35685/M137169

DESCRIPTION	NCR (Check Y/N)	COMMENTS
-------------	-----------------	----------

<input checked="" type="checkbox"/>	Y	SURFACE DAMAGE
<input checked="" type="checkbox"/>	Y	CORRECT FINISH
<input checked="" type="checkbox"/>	Y	CORROSION
<input checked="" type="checkbox"/>	Y	CORRECT GRAIN DIRECTION
<input checked="" type="checkbox"/>	Y	CORRECT MATERIAL
<input checked="" type="checkbox"/>	Y	CORRECT THICKNESS
<input checked="" type="checkbox"/>	Y	PHOTO REQUIRED
<input checked="" type="checkbox"/>	Y	CORRECT MATERIAL
<input checked="" type="checkbox"/>	Y	CORRECT REF # TO LINK CERT
<input checked="" type="checkbox"/>	Y	CORRECT MATERIAL IDENTIFICATION
<input checked="" type="checkbox"/>	Y	CORRECT # ON THE MATERIAL
<input checked="" type="checkbox"/>	Y	DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF
<input checked="" type="checkbox"/>	Y	DOES THIS REQUIRE AN EXTRUSION REPORT

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	

Testers located in the Quality Office

QC 18 INSPECTION
 ENGINEERING SIGNOFF (if required)
 INSPECTED BY: CB 9-59
 DATE: 17-04-03
 SIGNED OFF BY: _____
 DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

H:\FORMS\Quality Assurance\approved QAMRIF Material Receipt Inspection Form revB

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304H80500 W/0.44
DATE: 17-04-03

PO / BATCH NO.: P035685/M137169

MATERIAL CERT REC'D: 45
QUANTITY RECEIVED: 60'
QUANTITY INSPECTED: 60'
QUANTITY REJECTED: 0

THICKNESS ORDERED: .049"
THICKNESS RECEIVED: .049"
SHEET SIZE ORDERED: 1/4
SHEET SIZE RECEIVED: 1/4

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y	
CORRECT FINISH	Y	
CORROSION	Y	
CORRECT GRAIN DIRECTION	Y	
CORRECT MATERIAL	Y	
CORRECT THICKNESS	Y	
PHOTO REQUIRED	Y	
CORRECT MATERIAL	Y	
CORRECT REF # TO LINK CERT	Y	
CORRECT MATERIAL IDENTIFICATION	Y	ASTM A369
CORRECT # ON THE MATERIAL	Y	HT # YX1506-712
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK	RECORD RESULTS BELOW	TYPE OF MATERIAL	SIZE OF TEST SAMPLE	HARDNESS / DUROMETER READING
		HRC		
		HRB		
		DUR A		
		DUR D		

Testers located in the Quality Office

QC 18 INSPECTION
ENGINEERING SIGNOFF (if required)
INSPECTED BY: [Signature]
DATE: 17-04-03
SIGNED OFF BY: [Signature]
DATE: [Signature]

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6616H.00X065

DATE: 17-04-03

MATERIAL CERT REC'D: yes

QUANTITY RECEIVED: 24

QUANTITY INSPECTED: 24

QUANTITY REJECTED: 0

PO / BATCH NO: P035685/M137169

THICKNESS ORDERED: .065"

THICKNESS RECEIVED: .067"

SHEET SIZE ORDERED: N/A

SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y	
CORRECT FINISH	Y	
CORROSION	Y	
CORRECT GRAIN DIRECTION	Y	
CORRECT MATERIAL	Y	
CORRECT THICKNESS	Y	
PHOTO REQUIRED	Y	
CORRECT MATERIAL	Y	
CORRECT REF # TO LINK CERT	Y	
CORRECT MATERIAL IDENTIFICATION	Y	
CORRECT # ON THE MATERIAL	Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	

ASTM B 31C
HT #00318927

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.	RECORD RESULTS BELOW	TYPE OF MATERIAL	SIZE OF TEST SAMPLE	HARDNESS / DUROMETER READING
		HRC		
		HRB		
		DUR A		
		DUR D		

Testers located in the Quality Office

QC 18 INSPECTION ENGINEERING SIGNOFF (if required)

INSPECTED BY: CB

DATE: 17-04-03

SIGNED OFF BY: _____

DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6616+0.635w.125 DATE: 17-04-03

PO / BATCH NO.: 0035685/M137169

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 24'
 QUANTITY INSPECTED: 24'
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.125"
 THICKNESS RECEIVED: 0.126"
 SHEET SIZE ORDERED: 11/4
 SHEET SIZE RECEIVED: 11/4

DESCRIPTION	NCR (check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	
CORRECT FINISH	<input checked="" type="radio"/> Y	
CORROSION	<input checked="" type="radio"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	
PHOTO REQUIRED	<input checked="" type="radio"/> Y	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL	SIZE OF TEST SAMPLE	HARDNESS / DUROMETER READING		
HRC	HRB	DUR A	DUR D	

Testers located in the Quality Office

QC 18 INSPECTION (if required)

INSPECTED BY: [Signature] DATE: 17-04-03

SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M606176 + 0.375W, 0.058
DATE: 17-04-03

PO / BATCH NO.: 0035685 / M137169

MATERIAL CERT REC'D: YES
QUANTITY RECEIVED: 84'
QUANTITY INSPECTED: 84'
QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.058"
THICKNESS RECEIVED: 0.06"
SHEET SIZE ORDERED: A1/A
SHEET SIZE RECEIVED: A1/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y	
CORRECT FINISH	Y	
CORROSION	Y	
CORRECT GRAIN DIRECTION	Y	
CORRECT THICKNESS	Y	
PHOTO REQUIRED	Y	
CORRECT MATERIAL	Y	
CORRECT REF # TO LINK CERT	Y	ASTM B210
CORRECT MATERIAL IDENTIFICATION	Y	HT #1180968
CORRECT M# ON THE MATERIAL	Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
TYPE OF MATERIAL	SIZE OF TEST SAMPLE	HARDNESS / DUROMETER READING		
HRC		HRB	DUR A	DUR D

Testers located in the Quality Office

QC-18 INSPECTION
INSPECTED BY: OB
DATE: 17-04-03
SIGNED OFF BY: _____
DATE: _____
ENGINEERING SIGNOFF (if required)

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER
Purchase Order ID P035685
Purchase Order Date 3/23/2017
PO Print Date 3/23/2017
Page Number 1 of 4

Order From :

VU-TWM001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

TW METALS
PO BOX 933014
ALTANTA, GA 31193-3014
US

E-MAILED
MAR 23 2017

Contact Name	Vendor Phone	585 768 5600	Buyer	Chantal Lavoie
Ship To Contact	Ship To Phone	YRC COLLECT	Customer POID	10127-2607
Ship Via:	Ship Acct:		Customer Tax #	Net 30
			Currency	USD
			FOB	FCA - (Free Carrier)

Line	Reference	Nbr	Vendor Part Number	Description/ Mfg ID	Reg Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
------	-----------	-----	--------------------	------------------------	----------------------	----	--------------------------------	---------------	-------------------

1	M304TR0.500W.035			304 RD Tube .500 x .035W	3/31/2017	Yes	20.00	\$1.50	\$30.00
MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING AS PER ASTM A213 OR AMSE SA213 OR ASTM A269									
Delivery Comments									

2	M304TR0.500W.049			304 RD Tube .500 x .049W	3/31/2017	Yes	60.00	\$2.80	\$168.00
MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING AS PER ASTM A213 OR AMSE SA213 OR ASTM A269									
Delivery Comments									

Line Total: \$168.00

Line Total: \$30.00

Note:

3/23/2017



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER
Purchase Order ID PO35685
Purchase Order Date 3/23/2017
PO Print Date 3/23/2017
Page Number 2 of 4

Order From :

VU-TWM001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA
TW METALS
PO BOX 933014
ALANTA, GA 31193-3014
US

Contact Name
Vendor Phone

585 768 5600

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

YRC COLLECT

3 M316TRI.00W.120

316 RD tubing 1.00 x .120w

3/31/2017
Yes

MATERIAL: AISI 316 SA SEAMLESS ROUND TUBING
AS PER ASTM A213 OR AMSE SA213 OR ASTM A269

NOTE: 304 NOT ACCEPTABLE 316 REQUIRED

4 M6061T6T0.375W.058

6061-T6 RD Tube .375 x.058W

3/31/2017
Yes

MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING
AS PER WW-T-700/6 OR QQ-A-200/8 OR QQ-A-225/8 OR
AMS 4080 OR AMS 4082 OR AMS 4083 OR ASTM B210 OR
ASTM B241

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

12.00

\$5.00

new 84 ft

80.00

\$2.15

new 84 ft

Line Total:

\$172.00

Line Total:

\$60.00

7 pc

8817-03-28

3/23/2017

Note:



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35685

Purchase Order Date 3/23/2017
PO Print Date 3/23/2017

Page Number 3 of 4

Order From :

VU-TWM001

Ship To : DART AEROSPACE LTD

TW METALS
PO BOX 933014
ALANTA, GA 31193-3014
US

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

585 768 5600

Vendor Phone

Ship To Contact

Ship To Phone

Ship Via:

YRC COLLECT

Ship Acct:

M6061T6T0.625W.125

6061-T6 RD Tube 0.625
X.125W

3/31/2017

Yes

3/31/2017

MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING

AS PER WW-T-700/6 OR QQ-A-200/8 OR QQ-A-225/8 OR

AMS 4080 OR AMS 4082 OR AMS 4083 OR ASTM B210 OR

ASTM B241

M6061T6T1.000W065

6061T6 RD TUBE 1.00 x
.065w

3/31/2017

Yes

3/31/2017

MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING

AS PER WW-T-700/6 OR QQ-A-200/8 OR QQ-A-225/8 OR

AMS 4080 OR AMS 4082 OR AMS 4083 OR ASTM B210 OR

ASTM B241

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

USD

FOB

FCA - (Free Carrier)

Line Total:

\$103.00

\$2.96

\$59.20

Line Total:

\$59.20

Note:

3/23/2017



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER
Purchase Order ID PO35685
Purchase Order Date 3/23/2017
PO Print Date 3/23/2017
Page Number 4 of 4

Order From :

VU-TWM001

Ship To : DART AEROSPACE LTD

TW METALS
PO BOX 933014
ALANTA, GA 31193-3014
US
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name	Vendor Phone	Ship To Contact	Ship To Phone	Ship Via:	Ship Acct:	7	71401-45	PROCUREMENT	3/31/2017	No	3/31/2017	1.00	\$0.00	\$0.00
Chantal Lavoie	585 768 5600			YRC COLLECT				PROCUREMENT						
Buyer	Customer POID	Customer Tax #	Terms	Currency	FOB									
		10127-2607	Net 30	USD	FCA - (Free Carrier)									

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

801403-28

Line Total: \$0.00
PO Total: \$592.20

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 1 Change Date: 3/23/2017